

REMARKS

In reply to the Office Action of February 26, 2007, Applicant submits the following remarks. Claims 33, 54 and 57-59 have been amended. Support for the amendments to the independent claims can be found at least in the specification as filed at page 6, in the last paragraph, which continues on the top of page 7. Also, applicant has amended the claim set so that the reference to the electrodes has been moved to dependent claims and to recite "wherein the first electrode and the second electrode extend in a same direction." Claims 44, 46 and 50 have been amended to correct typographical or grammatical errors. Claims 61-66 are new. Claims 61-63 are supported by the claims as originally filed and by FIGS. 1 and 2 and the accompanying text. Claims 64-66 are supported by FIG. 1 and the specification on page 2, lines 14-27, page 3, lines 10-23, page 4, lines 22-26, page 5, lines 1-18 and page 7, lines 1-7 and 23-30. Applicant respectfully requests reconsideration in view of the foregoing amendments and these remarks.

Drawing Objection

FIGS. 1 and 2 have been objected to because the drawings allegedly do not show the first electrode and the second electrode aligned in the first direction. The Examiner has requested a proposed drawing correction or corrected drawings. Applicant respectfully traverses this objection. Specifically, applicant submits that the figures show the positioning or alignment of the electrodes.

FIG. 1 is a cross-sectional view of a substrate 102 with a transparent conductor line 106 on the substrate, organic layers 108 and 110 on the transparent conductor line 106 and a cathode structure 112 on the organic layers 108 and 110. A set of conductor line 106, organic layers 108 and 110 and cathode 112 make up a pixel area 101a. Pixel areas 101a, 101b, 101c, 101d are fabricated in stripes. A cross section of the device showing multiple pixels would either show a cross section of each stripe, as shown in FIG. 1, or the length of a single pixel.

FIG. 2 shows a plan view of a device with pixel lines 204, 206, 208, etc. Because the pixels are formed in lines and two electrodes are required to form a pixel, the two electrodes

must be parallel to one another and on either side of the organic material in order to form a linear pixel. If the electrodes were aligned in any other configuration, e.g., perpendicular to one another, the pixels would not be linear pixels as shown in FIG. 2. Note that the pixels can also be formed as stripes, as shown in FIG. 2, if the anode is formed as a single unpatterned layer and the cathodes are formed as multiple stripes, or vice versa.

Applicant further submits that due to the inherent limitation of two dimensional drawings, the electrodes of a single light segment are adequately indicated as both being in one direction. For at least these reasons, applicant believes that corrections to the figures would not more adequately show the electrodes in one direction.

Specification Objection

The specification has been objected to as being "incomprehensible as to preclude a reasonable search of the prior art by the examiner." Specifically, "the first electrode and second electrode are aligned in the first direction" is objected to.

Applicant submits that the specification provides written description support for the claim language that was previously pending and the claim language that is currently found in claims 61-63. For example, on page 1, lines 14-27, the specification notes that the first conductor layer of ITO, IZO or the like is patterned into stripes, i.e., to form an anode. The cathode structure 112 is then deposited either as similarly segmented or striped as the anode structure (page 4, lines 22-26). The specification also notes that the pixel areas 101a, b, c and d could be fabricated as stripes (page 5, line 27). Again, this supports the claim language noted above since stripes of pixel areas would include stripes of anode and cathode material aligned in one direction. The specification also describes RGB pixel lines 204-214 (page 7, lines 1-2), which would be formed by first and second electrodes that extend in a same direction.

Further, the Examiner has now issued four office actions and a notice of allowance. Applicant submits that this is the first objection to the specification that has been issued. MPEP 904 notes that "The examiner, after having obtained a thorough understanding of the invention disclosed and *claimed* in the nonprovisional application, then searches the prior art. . . . The first

search should cover the invention as described and claimed, including the inventive concepts *toward which the claims appear to be directed.*" Because the Examiner has reviewed the claims a minimum of four times now, applicant submits that the Examiner has a thorough understanding of the claimed invention. Therefore, applicant does not believe that the Examiner is now unable to search the art based on the *specification* as submitted.

For at least these reasons, applicant submits that the language in the specification describes the embodiments sufficiently well to allow the examiner to perform a search of the art. Applicant submits that no amendments to the specification are required.

Section 112 Rejections

Claims 33-40, 44-50 and 54-60 have been rejected under 35 U.S.C. § 112, ¶ 2, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner appears to have rejected the phrase "the first electrode and second electrode are aligned in the first direction." Applicant respectfully traverses this rejection.

The Examiner has stated that the above quoted phrase "renders the claims indefinite because they are unclear whether the limitations following the phrase are part of the claimed invention". Applicant respectfully submits that this statement does not clearly provide the basis of the rejection. Applicant submits that each positively recited limitation in a claim defines a part of the claimed subject matter. Thus, a limitation recited in a claim is part of the claim. Applicant's limitations are positively recited in each claim in which they appear. Applicant also notes that the Examiner has already searched the subject matter on at least four occasions and has not previously issued a section 112 rejection. Therefore, applicant believes that the subject matter is sufficiently well defined to permit the Examiner to conduct further searches on the claims.

Even though the applicant finds lacking the identification of the reason that the claims have been rejected as indefinite, applicant provides the following response. In combination with the amendments made to the claims, the applicant submits that the FIGS. and the corresponding

disclosure in the specification describe the first electrodes and second electrodes as extending in a same direction. Applicant respectfully requests withdrawal of the rejections.

Rejections over Clark

Claims 33-35, 39-40, 45, 46 and 49-60 were rejected under 35 U.S.C. 102(e) as allegedly being anticipated by U.S. Publication Number 2003/0010892 ("Clark"). Claims 36, 44 and 47-48 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Clark. The applicant respectfully disagrees in light of the amendments to the claims.

Amended claim 33 is directed to an OLED light source having a plurality of separately addressable active segments where a driver circuit is electrically connected to the plurality of segments, wherein each segment has a length significantly greater than its width and each segment is individually controllable by the driver circuit such that the chromaticity of light output from the light source is selectable by mixing different intensities of emitted light of the separate segments.

Clark describes an imaging system with an OLED array that can be used as a light source for a display and a light source for illuminating an object to be scanned (Abstract and paragraph 57). The display has a transparent segmented anode electrode 605, which forms pixels (paragraph 57).

The display has segmented anodes for forming individual pixels that can reproduce an image that is scanned. The pixels of the display are not described as segments with a length significantly greater than their width. Thus, Clark's display does not anticipate claim 33 as amended.

Clark's scanner has a source 790 with a continuous transparent electrode 606, (paragraph 57). The hole injection layer 610 and electron transport layer 630 each have the same area as the transparent electrode 606. Thus, instead of providing individual pixels of light as in the display, the scanner has lengths of emitters 615, 620 and 625 that produce lines of red, green and blue light.

In the scanner, the banks of emitters are connected in parallel so that all of the red emitters 615 in the source 790 operate simultaneously, all green emitters 620 operate simultaneously and all blue emitters 625 operate simultaneously (FIG. 8, paragraph 58). In operation, a scanner with a source 800 emits red light from the red OLED source segments 655, detects the light from the red scan and stores the reflected light (paragraph 73). Next, all of the green OLED source segments 660 are energized to emit green light, and the reflected green light is detected and stored. Finally, blue emitters 665 are energized to form blue light, the blue light is reflected from the item being scanned and detected and the detected blue light is stored. The scanner moves the item being scanned 210 one line and repeats the scanning process for each color.

The scanner has lines of emitters, however the lines of emitters are controlled so that all of the emitters of one color are energized at one time, but emitters of other colors are not emitted together. The scanner does not have a driver circuit that controls the segments so that the chromaticity of light output is selectable by mixing different intensities of emitted light. Thus, Clark fails to suggest or disclose an OLED light source having a plurality of separately addressable active segments where a driver circuit is electrically connected to the plurality of segments, wherein said each segment is individually controllable by the driver circuit such that the chromaticity of light output from the light source is selectable by *mixing different intensities of emitted light of the separate segments*. For at least this reason, applicant submits that claim 33 as amended is not anticipated by Clark. Claims 34-36, 39-40, 44-46 and 47-50 depend from claim 33 and are similarly not anticipated.

Amended claim 54 is directed to a method of controlling output light from an organic light emitting diode source and includes driving individually separately addressable active segments according to input color information such that the output light from said light source correlates to the input color information, wherein each segment has a length significantly greater than its width.

For similar reasons as those presented above with respect to claim 33, applicant submits that claim 54 is not anticipated by Clark, and that claims 55-58 are not anticipated by Clark.

Specifically, Clark does not describe driving a device with individually separately addressable active segments, which have a length greater than a width, according to input color information such that the output light from said light source correlates to the input color information.

Amended claim 59 is directed to an OLED light source with a controller capable of driving a plurality of independently addressable light segments such that the chromaticity of light output from the light source is selectable by mixing different intensities of emitted light of the separate segments, wherein each segment has a length significantly greater than its width.

For reasons similar to those presented above with respect to claim 33, applicant submits that claim 59 is not anticipated by Clark. Claim 60 depends from claim 59 and is similarly not anticipated by Clark.

Regarding the obviousness rejections over some of the claims that depend from claim 33, applicant submits the following. Clark is directed to emitting individual colors of light to scan an image. Because each primary color of the image is to be captured individually, no two colors of light are emitted simultaneously. Clark teaches emitting multiple colors of light individually, because emitting the colors simultaneously would require multiple image sensors and would thus be expensive and complicated to manufacture (paragraph 13). Thus, Clark teaches away from combining the colors of emitted light when operating the scanner.

While Clark's display emits red, blue and green light simultaneously, it is to form an image. The display does not have active segments with lengths greater than widths. Such a configuration would distort the display's ability to recreate a scanned image with different colored pixels. Because one of Clark's goals is to be able to accurately reconstruct a scanned image on a viewing screen, Clark teaches away from modifying the pixels into segments that have a length that is significantly greater than their width as this would distort the ability to form small pixels that could accurately represent an image.

For at least these reasons, applicant submits that after amendment of the independent claims, there is no *prima facie* case of obviousness pending. Applicant respectfully requests withdrawal of the obviousness rejections.

Allowable Subject Matter

Applicant thanks the Examiner for finding the subject matter of claims 35 and 37-38 to be allowable. Applicant submits that the claims are also allowable because they depend from claims that are not anticipated or obvious over Clark for the reasons provided above.

New Claims

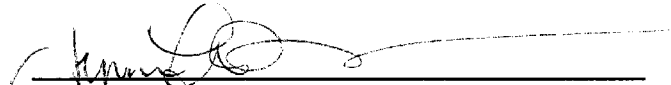
Claims 61-64 are new. New claim 61 depends from claim 59 and is allowable for at least the same reason as claim 59. New claim 62 depends from claim 33 and is allowable for at least the same reason as claim 33. New claim 63 depends from claim 54 and is allowable for at least the same reason as claim 54.

New claim 64 substantially includes the subject matter of former claims 33, 35, 37 and 38, which were found to be allowable by the Examiner. Claim 65 depends from claim 64. Thus, applicant submits new claims 64 and 65 contain allowable subject matter.

The one-month extension of time fee in the amount of \$120 and the excess claim fees in the amount of \$200 are being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other required charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: March 26, 2007



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